PRINTER RUSH
(PTO ASSISTANCE)

Application : 10/701,185 **Examiner :** Gebremariam **GAU :** 2811

From: DP **Location:** (IDC) BMF FDC **Date:** 3/9/06

Tracking #: epm 10/701,185 Week Date: 1/9/2006

DOC CODE	DOC DATE	MISCELLANEOUS
☐ 1449		☐ Continuing Data
☐ IDS		☐ Foreign Priority
☐ CLM		☐ Document Legibility
☐ IIFW		☐ Fees
☐ SRFW		☐ Other
☐ DRW		
☐ OATH		
☐ 312		
☒ SPEC	11/4/2003	

[RUSH] **MESSAGE:** please provide missing Serial No. — on page 7 Line # 18 of specification.

Thank you.

[XRUSH] **RESPONSE:**

Doe

INITIALS: pp

NOTE: This form will be included as part of the official USPTO record, with the Response document coded as XRUSH.

REV 10/04

an imide, acrylate, methacrylate , isocyanate, epoxide, vinylsilane, silsesquioxane, cycloalkene or ethacrylate for example. A suitable dielectric layer 115 can be formed, for example, by surface growth of zirconium biphenyl-4,4'-diphosphonate. See Katz, H.E. et al., Chemistry of Materials, vol. 5, pp. 1162-1166 (1993). Another suitable dielectric layer 115 can be formed, for example, by surface growth of polynorbornenes or polycyclopentadienes and derivatives by ring opening metathesis polymerization, using benzylidenerüthenium dichloride complexes, also known as "Grubbs catalysts". These reagents are commercially available from Sigma-Aldrich.

In one embodiment, the first dielectric precursor composition comprises a high dielectric material for the purpose of increasing the overall dielectric constant of the dielectric layer 115 to be produced. In such an embodiment, the high dielectric material may take the form of particulate material suspended in other components, resulting in inhomogeneities in the dielectric layer 115. These inhomogeneities may include through holes, pits and bumps, which are then remediated as described below. Pits are indentations in the surface of the dielectric layer 115; and bumps are protrusions on the surface. Suitable high dielectric materials include, for example, titanium dioxide, barium titanate, strontium titanate, and other mixed oxides comprising titanium, barium, strontium, lanthanum and/or zirconium. See, for example, U.S. Patent Application Serial No. 10700651 of Howard E. Katz and Ashok J. Maliakal, filed concurrently with this application, entitled "LAYER INCORPORATING PARTICLES WITH A HIGH DIELECTRIC CONSTANT", the entirety of which hereby is incorporated herein by reference.

In another embodiment, the first dielectric precursor composition is selected to be relatively non-reactive with the semiconductor chosen for fabrication of the semiconductor